



Road traffic noise mitigation – Recent progress and trends

Abstract

Road traffic noise is a topic of major concern worldwide as a problem of reduced life quality and public health causing huge costs to society. No quick fix is possible, so to mitigate traffic noise requires bringing many complex pieces of a puzzle together. The paper addresses such pieces as applying noise reducing pavement and low noise vehicle tyres, the efficient planning of noise barriers and other mitigation tools from a perspective of getting available knowledge implemented on the roads. The application of noise reducing pavement tends to involve less durable surfacings implying extra burdens on road administration budgets, and to persuade decision makers that such extra cost is well spent is not straightforward. There is little doubt that to mitigate noise at every road neighbour by reducing the source noise emission is more cost-efficient than erecting a barrier or improving the sound insulating of buildings. In many cases the combination of noise reducing pavement and other measures is needed to keep within environmental noise limits. Examples of ongoing and recently completed work on the structural and acoustical durability of asphalt surfacings and on vehicle tyre/road noise will be given.

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Jørgen Kragh is a senior researcher in the noise group at the Danish Road Directorate, Technology Division, which he joined in 2005 to specialize in reducing road traffic noise. He is a Copenhagen resident who graduated in 1969 as MSc in Civil Engineering from the Technical University of Denmark where in 1973 he made his first INTER- NOISE presentation on the measurement of road traffic noise. 1969-2005 he was a researcher and business area manager of the Environmental Noise Department at the Danish Acoustical Institute, now DELTA, Danish Electronics, Light and Acoustics. He has been working in the prediction and propagation of most types of environmental noise and among other things performed the first Danish series of road vehicle pass-by noise measurements and the first Danish measurements of the noise reducing effect of porous asphalt. He is a member of the ISO working group standardising measurement

methods for evaluating the noise characteristics of road surfaces and has coordinated many national and international projects, perhaps most importantly when chairing the technical committee developing Nord2000 - the Nordic prediction method for environmental noise. He is an enthusiastic amateur jazz trombonist and he has five grandchildren living in Copenhagen and Brussels.